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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,370	08/31/2001	Jason N. Farmer	60988-P002US-10103486	2123

29053 7590 04/26/2004

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EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT PAPER NUMBER

2828

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/945,370

Applicant(s)

FARMER, JASON N.

Examiner

Armando Rodriguez

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Regarding the amendment filed on January 6, 2004:

Claims 1-25 have been cancelled.

Claims 26-49 are pending.

The objection to the drawings has been withdrawn based on applicant's canceling claim 6.

The objection of claims 5, 24 and 30 have been withdrawn based on applicant's amendment of claim 30 and canceling of claims 5 and 24.

Regarding the 35 USC 101 rejections of claims 18 and 37, on page 8 applicant discusses amending the claim 37, however no amendment has been recorded within the claim language. Claim 18 has been cancelled, rejection withdrawn.

The 35 USC 112 second paragraph rejection of claims 2, 3, 11, 27 and 28 has been withdrawn based on applicant's amendment.

Response to Arguments

Applicant's arguments, see page 10, filed January 6, 2004, with respect to the rejection(s) of claim(s) 1, 8, 12-20, 24, 25, 26 under 35 USC 102 and claims 2-7, 9-11, 21-23, 39-49 under 35 USC 103, where applicant describes the cited prior art Onaka pertaining to different subject matter, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Palese (PN 6,570,704).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 37 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 37 pertains to an algorithm, recited as "a learning algorithm". How does this algorithm learn? Is it by statistics? Thereby, the claim is interpreted by the examiner as merely claiming an algorithm.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 26,33-39,40,42,43 and 46-49 rejected under 35 U.S.C. 102(e) as being anticipated by Palese (PN 6,570,704).

Regarding claims 26 and 39,

In figure 1 Palese illustrates a wavelength source amplification arrangement having as the amplifier an array of pump diodes (18) for amplifying an array of seed wavelengths (12). The array of laser diodes are coupled to an array of lens (36) for collimating the laser diode beams on dispersive optical elements (34). The arrangement

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of figure 1 includes a computer (28) for controlling the power of the laser diode array in accordance to a feedback signal (20). See column 2 line 60 to column 3 line 33.

Regarding claim 40,

Figure 1 illustrates an array of lenses (36) for collimating the laser diode beams.

Regarding claim 42,

Figure 1 illustrates a spectrometer (24) coupled to the computer for monitoring the wavelengths and providing power array feedback through line (30).

Regarding claim 43

Figure 2 illustrates a linear photodiode array (124) as providing the feedback signal for the computer (128) for controller the pump diode array (118).

Regarding claims 33-38 and 46-49

Figure 1 of Palese illustrates an optical spectrum monitor (24), which includes a CCD (26) and a signal-processing computer (28). Column 3 discloses the spectrometer monitoring the wavelengths, which provides input signal to the computer for adjusting the pump laser diodes in accordance with the monitored wavelengths.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27-32,41,44,45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palese (PN 6,570,704) in view of Mead et al (PN 6,456,756).

Regarding claims 27-32,41,44,45,

In figure 1 Palese illustrates a wavelength source amplification arrangement having as the amplifier an array of pump diodes (18) for amplifying an array of seed wavelengths (12). The array of laser diodes are coupled to an array of lens (36) for collimating the laser diode beams on dispersive optical elements (34). The arrangement of figure 1 includes a computer (28) for controlling the power of the laser diode array in accordance to a feedback signal (20). See column 2 line 60 to column 3 line 33.

Palese does not disclose an external cavity providing feedback to the gain elements.

In figure 7 Mead et al illustrates a laser system having a laser diode array (403) coupled to a diffraction grating (411), an output coupler (407) and an optical amplifier (415) forming an external cavity the external cavity including focusing lens (409) and (413), diffraction grating (411). In column 6 lines 4-9 suggest replacing individually pump laser diodes with laser array (403).

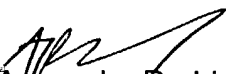
Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to the laser diodes of Palese with the laser diode array arrangement of Mead et al, which forms the external cavity, as disclosed by Mead et al because it would provide a single output beam having predetermined characteristics.

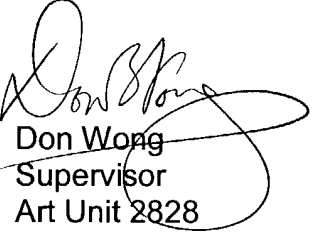
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Armando Rodriguez whose telephone number is 571-272-1952. The examiner can normally be reached on flex / M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Armando Rodriguez
Examiner
Art Unit 2828


Don Wong
Supervisor
Art Unit 2828

AR/DW